

**SUBMARINE TACTICAL VISUAL TRAINING SYSTEM (STVTS), DEVICE 21B68****TRAINING CATEGORY:**

UNDERSEA OPERATIONS (SHIP)
(Attack and Surveillance/Reconnaissance)

ORIGINATING AGENCY:

NAVSEA

SECURITY CLASSIFICATION:

Device 21B68 is SECRET.

PURPOSE OF DEVICE:

The Device 21B68 provides capability of indoctrinating and training SSN fire control personnel in basic and advanced submarine tactical techniques. It is used for training in tactical operations in the area of submarine approach, submarine attack, and surveillance/reconnaissance.

INTENDED USE:

The Device 21B68 will be used to simulate SSN 594, 637, and 688 attack center environments.

FUNCTIONAL DESCRIPTION:

The Device 21B68 provides simulation of a Type 15 periscope to the various attack centers of the Device 21A43 SCSTT. The periscope portion of the Device 21B68 provides the trainee with a simulated view of the real world environment. The visual appearance of the real-world is provided by a monitor in the Display Unit Enclosure located on the Model Deck. The Host Trainer Simulation Computer generates and controls training scenarios that are produced by the Image Generator and displayed on the monitor. The simulated periscope also provides bearing and elevation data through the Indicator and Control Box assembly to the Periscope Interface Unit in the Image Generator for processing by the Simulation Computer. This Computer generates visual and control information for the team trainer. Each Device 21B68 consists of two (2) major sections: The Periscope Station and the Image Generator (GFE). The Periscope Station consists of an Eyepiece Box, an Electrical and

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Electronics (E&E) Adapter, a Periscope Head and Tube Assembly, a Periscope Hoisting Ring and Control Unit, a Display Unit Enclosure, an Indicator and Control Box Assembly and a Periscope Operator's Platform.

PHYSICAL INFORMATION:

Weight and Size Data are as Follows:

PERISCOPE OPERATORS PLATFORM,
600 lbs., 28" H x 54.75" W x 78.69" D

PERISCOPE MOTION CONTROLLER ASSY,
30 lbs., 24" H x 20" W x 9" H

PERISCOPE LIFT MOTOR,
150 lbs., 24" H x 12" W x 12" D

INDICATOR AND CONTROL UNIT,
25 lbs., 19" H x 15" W x 10" D

LOWER PERISCOPE ASSY,
1,050 lbs., 86" H x 12" W x 17" D

UPPER PERISCOPE ASSY,
350 lbs., 64" H x 20" W x 20" D

SPEAKER ASSY,
2 lbs., 3" H x 2.50" W x 2.50" D

DISPLAY UNIT ENCLOSURE,
500 lbs., 42" H x 162" W x 42" D

PERISCOPE DISPLAY MONITOR,
150 lbs., 18.75" H x 23.75" W x 23.65" D (GFE)

POWER REQUIREMENTS:

Both the Attack Center and Model Deck each require 120/208 VAC, 60 Hz., three-phase power.

PUBLICATIONS FURNISHED:

The following publications support the Device 21B68:

1. Instructor Utilization Handbook, NAVTRADEV P-5498 (U).
2. System Maintenance Manual, NAVTRADEV P-5496 (U).
3. Planned Maintenance System, NAVTRADEV P-5497 (U).
4. Trainer Configuration Audit Plan & Report, NAVTRADEV P-5500 (U).
5. Curriculum Outline, NAVTRADEV P-5499-3 (U).
6. Instructor Lesson Guide, NAVTRADEV P-5499-2 (U).
7. Student Training Guide, NAVTRADEV P-5499-1 (U).

PERSONNEL:

The personnel requirements for two (2) eight (8) hour training shifts are as follows:

- Instructor:** One (1), E5, E6, E7-FT or DS minimum per training shift.
- Operator:** One (1), E5, E6, E7-FT or DS minimum per training shift.
- Trainees:** Class of Ten (10) trainees per shift.
- Maintenance:** One (1) E4 or E5-FT, ST, DS or ET or one (1) FTG/SS, FTG/2 or equivalent knowledge of optics minimum per training shift.

CONTRACT IDENTIFICATION:

Manufactured by American Systems Corp., Winter Park, FL under NAVTRASYSNEN Contract No. N61339-86-C-0089.

LOCAL STOCK NUMBER:

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